AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

Listing of Claims

Claims 1-8 (Cancelled)

Claim 9 (Currently amended): A method of producing a grid for a battery electrode plate, comprising the steps of:

providing a sheet to become the grid for the battery electrode plate;

providing a rotary expander, and

forming the grid from the sheet by the rotary expander, wherein said rotary expander comprises a disk cutter cluster comprising:

a first disk cutter roll having a first middle disk cutter;

a second disk cutter roll having a second middle disk cutter, the first disk cutter roll and the second disk cutter roll being a pair;

an edge disk cutter at an outermost end of said disk cutter cluster; wherein the edge disk cutter comprises;

a first face facing the second middle disk cutter;

a second face opposite to the first face;

ridges disposed at a periphery of said edge disk cutter, wherein a notch is interposed between the ridges, wherein the notch is provided at the periphery of said edge disk cutter by

penetrating said edge disk cutter in the thickness direction of said edge disk cutter; and

an inclined surface provided on the ridges such that the ridges have ~~having~~ a tip having an acute angle, wherein the acute angle is formed between the first face and the inclined surface ~~on the first face~~, wherein said notch is provided to serve as an edge node forming part.

Claim 10 (Previously presented): The method of producing a grid for a battery electrode plate according to Claim 9,

wherein each of said ridges protrude by 30% or greater of the thickness of said sheet from a reference plane of said disk cutter cluster.

Claim 11 (Previously presented): The method of producing a grid for a battery electrode plate according to Claim 10,

wherein each of said ridges protrude by 70% or greater of the thickness of said sheet from said reference plane.

Claim 12 (Previously presented): The method of producing a grid for a battery electrode plate according to Claim 9,

wherein the height of protrusion of each of said ridges from a reference plane of said disk cutter cluster is 110% or less of the thickness of said sheet.

Claim 13 (Previously presented): The method of producing a grid for a battery electrode plate according to Claim 9,

wherein a bottom part of said notch is positioned on the second disk cutter roll equipped with said edge disk cutter against a reference plane of said disk cutter cluster.

Claims 14-15 (Cancelled)

Claim 16 (Currently amended): A method of producing a lead-acid battery, comprising the steps of:

providing a sheet to become a grid for a battery electrode plate;

providing a rotary expander; and

forming the grid from the sheet by the rotary expander, wherein said rotary expander comprises a disk cutter cluster comprising:

a first disk cutter roll having a first middle disk cutter;

a second disk cutter roll having a second middle disk cutter, the first disk cutter roll and the second disk cutter roll being a pair;

an edge disk cutter disposed at an outermost end of said disk cutter cluster; wherein the edge disk cutter comprises

a first face facing the second middle disk cutter;

a second face opposite to the first face;

ridges disposed at a periphery of said edge disk cutter, wherein a notch is interposed between the ridges, wherein the notch is provided at the periphery of said edge disk cutter by penetrating said edge disk cutter in the thickness direction of said edge disk cutter; and

an inclined surface provided on the ridges such that the ridges have ~~having~~ a tip having an acute angle, wherein the acute angle is formed between the first face and the inclined surface ~~on the first face~~, and wherein said notch is provided to serve as an edge node forming part.

Claim 17 (Previously presented): The method of producing a lead-acid battery according to Claim 16,

wherein each of said ridges protrude by 30% or greater of the thickness of said sheet from a reference plane of said disk cutter cluster.

Claim 18 (Previously presented): The method of producing a lead-acid battery according to Claim 17,

wherein each of said ridges protrude by 70% or greater of the thickness of said sheet from said reference plane.

Claim 19 (Previously presented): The method of producing a lead-acid battery according to Claim 16,

wherein the height of protrusion of each of said ridges from a reference plane of said disk cutter cluster is 110% or less of the thickness of said sheet.

Claim 20 (Previously presented): The method of producing a lead-acid battery according to Claim 16,

wherein a bottom part of said notch is positioned on the second disk cutter roll equipped with said edge disk cutter against a reference plane of said disk cutter cluster.

Claims 21-29 (Cancelled)